

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Claim amendments/Status

In this response, claims 13-24 are cancelled and replaced with new claims 25-35. This claim replacement moots all current rejections under § 103. Full support for the newly presented claims is found in the cancelled claims and the originally filed written description.

Rejections under 35 USC § 103

As noted above, the rejection of:

Claims 13-15, 17-20, 22-24 under 35 USC 103(a) as being unpatentable over Cao et al. (US 7,346,122) (hereinafter Cao) in view of Yang et al. (US 7,136,628) (hereinafter Yang);

Claim 16 under 35 USC 103(a) as being unpatentable over Cao and Yang, as applied to claim 20 above, and further in view of Antonio et al. (US 6,600,792) (hereinafter Antonio); and

Claim 21 under 35 USC 103(a) as being unpatentable over Cao and Yang, as applied to claim 20 above, and further in view of Checoury et al. (US 6,947,143);

are summarily rendered moot by the cancellation the rejected claims.

The newly presented claims are submitted as being patentable over the cited art for at least the following reasons.

Newly presented claim 25 has been drafted to call for the the complex digital signal (s_{er} , d) to be the only necessary signal to determine the corrector c. The Applicant's specification provides support for this feature – see page 5, lines 13-17 : *"The invention proposes to determine the delay between the envelope e and the phase p with the aid of another criterion such that the correction loop 60 does not need the baseband signal s to perform this determination"*, and also in page 8, lines 16-18 : *"This is why the correction loop 60 may comprise this input alone receiving the digital signal s_{er} having at least one parameter to be corrected p_c"*.

Claim 25 has also been drafted to call for sub steps explaining how to determine the corrector c. These sub steps are supported by the Applicant's specification at page 7, line 29 – page 8, line 7.

The reference to Cao discloses a loop correction loop that needs the baseband signal to produce the control signals for the adaptive digital predistortion, as described at lines 13-18, column 8 : *"The predistortion calibration 533 produces the control signals for the adaptive predistortion by comparing the digital baseband phase-modulated signal PM and amplitude-modulated signal AM to the demodulated feedback signals labeled respectively as AM_q, PM_q and PM_vco generated from the demodulation 535."*

Newly presented claim 25 differs from Cao in that :

- (i) no other signal than (s_{ar} , d) is necessary to determine the corrector c ;
- (ii) the corrector c is obtained by searching, among predetermined values, for the value of the corrector corresponding to the minimum of the out-of-band noise power (N_r) of the output signal of a digital signal processing chain comprising a correction as a function of said corrector ;
- (iii) the corrector c is determined by executing the sub steps described at page 7, line 29 – page 8, line 7.

Newly presented independent claim 26 is drafted such as to include the feature of cancelled claim 15 which corresponds to feature (i) aforementioned. The independent claim 26 is also amended to add the feature (iii) aforementioned.

The reference to Yang doesn't disclose decomposing the signal into a phase and an envelope signal, as it is claimed in independent claims 25 and 26.

Further, in addition to the fact that Coa fails to disclose features (i) and (ii), neither Cao nor Yang disclose or suggest feature (iii) of claim 25 and claim 26. Therefore, the hypothetical person of ordinary skill having both Cao and Yang documents would not have been led to the Applicant's invention as recited in claim 25 and claim 26. As a consequence, independent claims 25, 26, and dependent claims 27 to 35 are submitted as being both novel and non-obvious in light of the cited art.

Conclusion

It is respectfully submitted that the claims as they have been newly presented are allowable over the art which has been cited in this Office Action. Favorable reconsideration and allowance of this application are courteously solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
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